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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/716,113	11/16/2000	STEPHEN JOHN RUIZ	004164.P004	4948

7590 06/11/2002

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EXAMINER

NGUYEN, XUAN LAN T

ART UNIT	PAPER NUMBER
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3683

DATE MAILED: 06/11/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/716,113

Applicant(s)

RUIZ, STEPHEN JOHN

Examiner

Lan Nguyen

Art Unit

3683

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 April 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-40 is/are pending in the application.
- 4a) Of the above claim(s) 4,7-20,24 and 27-40 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3,5,6,21-23,25 and 26 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 09 April 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s) _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 5 and 25 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 5 and claim 25 both claim the leading edge and the trailing edge to be asymmetrical. However, the Applicant did not provide a reference point or line or plane wherein said leading edge and said trailing edge are to be asymmetrical in reference to said reference point or line or plane.

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1, 3, 6, 21, 23 and 26 are rejected under 35 U.S.C. 102(b) as being anticipated by Applicant's submitted prior art figures 1 and 2.

Re: claim 1, figure 2 shows a mounting hat 120 for a brake rotor 110, as in the present invention, comprising: a lower section (not numbered) coupled to an upper section (not numbered), a plurality of aerodynamically shaped standoff vanes 126 each

Art Unit: 3683

having a leading edge, a trailing edge, a top and a bottom coupled to the upper section, the aerodynamically shaped standoff vanes space apart the upper section from a brake rotor as shown in figures 1 and 2; and a plurality of vents 132 formed between adjacent aerodynamically shaped standoff vanes, wherein the vents are circumferentially distributed on the upper section, and air flow is induced to flow through the plurality of vents. Note that the term "aerodynamic" has been treated broadly. Applicant would need to further specifying this limitation to specifically describe the instant invention.

Re: claim 3, figure 2 shows the leading edge and the trailing edge of the plurality of aerodynamically shaped standoff vanes are one of stepped up and ramped up from the upper section towards the top of the plurality of aerodynamically shaped standoff vanes.

Re: claim 6, figure 2 shows a bore on each standoff vane 126.

Re: claim 21, figure 1 shows a brake rotor 110, a hub 120, standoff vanes 126 and vents 132 as discussed in the above claim 1 rejection.

Re: claim 23, figure 2 shows the leading edge and the trailing edge of the plurality of aerodynamically shaped standoff vanes are one of stepped up and ramped up from the upper section towards the top of the plurality of aerodynamically shaped standoff vanes.

Re: claim 26, figure 2 shows a bore on each standoff vane 126.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 2, 5, 22 and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant's submitted prior art figures 1 and 2, in view of Shimazu et al.

Re: claims 2 and 22, as discussed in the rejections of claims 1 and 21, submitted prior art figures 1 and 2 lack the leading edge and the trailing edge to be curved. Shimazu et al. teach the concept of providing a curving design to vanes 22 instead of a straight design of vanes F in order to improve air flow to increase heat removal from a rotor, see figures 1 and 5, column 1, lines 12-46 and column 2, lines 52-57. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the submitted prior art's standoff vanes to include a curving design such as Shimazu's in order to improve air flow to increase heat removal as taught by Shimazu in figures 1 and 5, column 1, lines 12-46 and column 2, lines 52-57.

Re: claims 5 and 25, as discussed in the rejections of claims 1 and 21, submitted prior art figures 1 and 2 lack the leading edge and the trailing edge to be asymmetrical. Shimazu et al. teach the concept of providing a curving design to vanes 22, making the leading edge and the trailing edge to be asymmetrical, instead of a straight design of

Art Unit: 3683

vanes F, where the leading edge and the trailing edge are symmetrical, in order to improve air flow to increase heat removal from a rotor, see figures 1 and 5, column 1, lines 12-46 and column 2, lines 52-57. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the submitted prior art's standoff vanes to include a curving design, which would make the leading edge and the trailing edge to be asymmetrical, such as Shimazu's in order to improve air flow to increase heat removal as taught by Shimazu in figures 1 and 5, column 1, lines 12-46 and column 2, lines 52-57. Please note the 112 rejection above.

Response to Arguments

5. Applicant's arguments with respect to claims 1-3, 5, 6, 21-23, 25 and 26 have been considered but are moot in view of the new ground(s) of rejection. Applicant's amendment files 4/9/02 necessitated the new ground of rejections.

Conclusion

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Marandet and Daudi show other brake designs.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lan Nguyen whose telephone number is 703-308-8347. The examiner can normally be reached on M-F, 9 to 5:30.

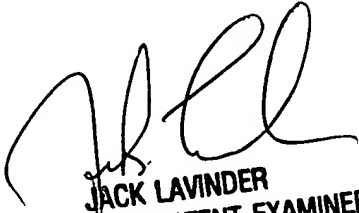
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jack Lavinder can be reached on 703-308-3421. The fax phone numbers

Art Unit: 3683

for the organization where this application or proceeding is assigned are 703-305-7687 for regular communications and 703-305-7687 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-306-4177.

XLN
June 3, 2002


JACK LAVINDER
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 3600
6/6/02